

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A stream data processing apparatus for performing multiple processing steps during a processing of stream data, said stream data processing apparatus comprising:

a transmitting-end processing section for performing a processing step, of one of said multiple processing steps, of processing data contained in the stream data, and transmitting the processed data;

a receiving-end processing section for receiving the processed data transmitted from said transmitting-end processing section, for receiving empty data, and for performing another processing step, of a next one of said multiple processing steps, of processing the received data;

a control section for transmitting a change signal to instruct a change of a subject of processing, the change signal being transmitted to said transmitting-end processing section and to said receiving-end processing section;

a data temporary storage section for temporarily storing the processed data transmitted from said transmitting-end processing section;

an empty data storage section for erasing any data written thereto in response to a data write, and for returning data indicating an end of a file as empty data in response to a data read; and

a connection management section for (i) allowing the processed data transmitted from said transmitting-end processing section to be received by said receiving-end processing section, via said data temporary storage section, by performing a data write to and a data read

from said data temporary storage section, and (ii) allowing empty data to be received by said receiving-end processing section, via said empty data storage section, by performing the data write to and the data read from said empty data storage section, wherein:

said control section, said transmitting-end processing section, said receiving-end processing section, and said connection management section are interconnected and configured such that, if a change signal is transmitted from said control section (i) to said transmitting-end processing section, said transmitting-end processing section is operable to output a transmitting-end clear request to said connection management section, and (ii) to said receiving-end processing section, said receiving-end processing section is operable to output a receiving-end clear request to said connection management section;

said connection management section is operable to (i) switch a write destination of the processed data transmitted from said transmitting-end processing section, the write destination being switched between said data temporary storage section and said empty data storage section, and (ii) switch a read source of any data, including the processed data and empty data, received by said receiving-end processing section, the read source being switched between said data temporary storage section and said empty data storage section;

the switching of the write destination and the switching of the read source being executed by said connection management section based on whether said connection management section is in (i) a normal operation state, (ii) a receiving-end clear wait state which exists after the transmitting-end clear request is received by said connection management section and until the receiving-end clear request is received by said connection management section, or (iii) a transmitting-end clear wait state which exists after the receiving-end clear request is received by

said connection management section and until the transmitting-end clear request is received by said connection management section.

Claim 2 (Previously Presented) The stream data processing apparatus according to claim 1, wherein said connection management section is operable to:

select said data temporary storage section as the write destination and the read source when said connection management section is in the normal operation state;

erase the processed data stored in said data temporary storage section if the transmitting-end clear request or the receiving-end clear request is received when said connection management section is in the normal operation state;

select said empty data storage section as the read source when said connection management section is in the receiving-end clear wait state; and

select said empty data storage section as the write destination when said connection management section is in the transmitting-end clear wait state.

Claim 3 (Previously Presented) The stream data processing apparatus according to claim 1, wherein said connection management section is operable to:

select said data temporary storage section as the write destination and the read source when said connection management section is in the normal operation state;

erase the processed data stored in said data temporary storage section if the receiving-end clear request is received when said connection management section is in the normal operation state;

select said empty data storage section as the write destination when said connection management section is in the transmitting-end clear wait state;

wherein, when said connection management section is in the receiving-end clear wait state said connection management section is operable to:

designate as old data any data stored in said data temporary storage section when the transmitting-end clear request has been received;

select, as the write destination, a region in said data temporary storage section where the old data is not stored;

select, as the read source, a region in said data temporary storage section where the old data is stored while the old data is present; and

select said empty data storage section as the read source once the old data is no longer present; and

erase the old data if the receiving-end clear request is received when said connection management section is in the receiving-end clear wait state.

Claim 4 (Previously Presented) The stream data processing apparatus according to claim 1, wherein said transmitting-end processing section and said receiving-end processing section are operable to output the transmitting-end clear request and the receiving-end clear request, respectively, and perform transmission and reception of any data by using a data transmission section and a data reception section, respectively, which provides an accessing function to said connection management section.

Claim 5 (Previously Presented) The stream data processing apparatus according to claim 1, wherein said connection management section is operable to select, if any data transmitted from said transmitting-end processing section cannot be written to said data temporary storage section, whether to (i) perform a process of immediately notifying an error to said transmitting-end processing section, or (ii) perform a process of waiting until it becomes possible to write any data to said data temporary storage section and perform a process of notifying said transmitting-end processing section a result of writing any data to said data temporary storage section.

Claim 6 (Previously Presented) The stream data processing apparatus according to claim 1, wherein said connection management section is operable to select, if any data to be received by said receiving-end processing section cannot be read from said data temporary storage section, whether to (i) perform a process of immediately transmitting an error to said receiving-end processing section, or (ii) perform a process of waiting until it becomes possible to read any data from said data temporary storage section and perform a process of notifying said receiving-end processing section a result of reading any data from said data temporary storage section.

Claim 7 (Previously Presented) The stream data processing apparatus according to claim 1, further comprising a data input section for receiving the stream data as an input.

Claim 8 (Previously Presented) The stream data processing apparatus according to claim 7, wherein said data input section is operable to receive the input of the stream data from a removable recording medium.

Claim 9 (Previously Presented) The stream data processing apparatus according to claim 1, further comprising a data output section for outputting the stream of data as a result of performing the multiple processing steps.

Claim 10 (Previously Presented) The stream data processing apparatus according to claim 9, wherein said data output section is operable to output, to a removable recording medium, the result of performing the multiple processing steps.

Claim 11 (Previously Presented) The stream data processing apparatus according to claim 1, wherein said transmitting-end processing section and said receiving-end processing section are operable to output the transmitting-end clear request and the receiving-end clear request, respectively, independent of one another.